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(54) HARD COATING FOR CUTTING TOOL, MANUFACTURING METHOD THEREFOR, AND TARGET FOR FORMING HARD COATING

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a hard coating for a cutting tool superior to a TiAlN film in abrasion resistance.

SOLUTION: The hard coating is constituted by a compound expressed by $(Alb, [Cr1-\alpha V\alpha]c) (C1-dNd)$, where the symbols satisfy $0.5 \leq b \leq 0.8$, $0.2 \leq c \leq 0.5$, $b+c=1$, $0.05 \leq \alpha \leq 0.95$, and $0.5 \leq d \leq 1$. Alternatively, the hard coating is constituted by a compound expressed by $(Ma, Alb, [Cr1-\alpha V\alpha]c) (C1-dNd)$, where M is at least one selected from the group consisting of Ti, Nb, W, Ta and Mo, and other symbols satisfy $0.02 \leq a \leq 0.3$, $0.5 \leq b \leq 0.8$, $0.05 \leq c$, $a+b+c=1$, $0.5 \leq d \leq 1$, and $0 \leq \alpha \leq 1$ (α indicates an atomic ratio of M). However, M and α shall not be simultaneously Ti and zero respectively.

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